
Treasure beneath the waves

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En juin 2000, le pétrolier *Treasure* faisait naufrage au large de l'Afrique du Sud, à c25 km du Cap. Environ 900 tonnes de mazout furent déversées en mer, menaçant 40% de la population du Manchot du Cap *Spheniscus demersus* sur les îles avoisinantes Robben et Dassen. L'espèce, dont les effectifs ont diminué de 90% au cours du vingtième siècle, figure actuellement comme 'Vulnérable' sur la Liste Rouge de BirdLife International. Un important plan de sauvetage fut lancé, comprenant l'acheminement de 19.000 manchots vers des centres de réhabilitation sur le continent pour y être nettoyés, et le déménagement de 19.500 autres pour éviter qu'ils soient mazoutés. L'opération a été couronnée de succès, près de 90% des oiseaux mazoutés ayant été nettoyés et relâchés. Des études faites à la suite des marées noires précédentes indiquent que des Manchots du Cap nettoyés ont des chances de survie égales à ceux qui n'ont jamais été mazoutés, et qu'ils sont capables de nicher avec succès par la suite.

The July 2000 newsletter of the Southern African Foundation for the Conservation of Coastal Birds (SANCCOB) commenced with the words 'The SANCCOB centre is experiencing a quiet period...'. By the time the newsletter had reached its members, SANCCOB was heavily involved with the worst oil spill to hit southern Africa, and was up to its eyeballs in oiled penguins!

It began when a fully laden bulk-ore carrier, ironically named *Treasure*, reported flooding in one of its holds, off the west coast of South Africa. Weather conditions were such that the damage could not be fully assessed at sea, and the ship was permitted to come inshore to Table Bay, close to Cape Town¹. An inspection revealed the true extent of the damage: a hole the size of a three-storey building below the waterline! An ultimatum to remove the fuel from the ship's tanks by noon on 22 June could not be met, and a decision was taken to tow the ship back out to sea, as it represented a major pollution hazard. The latter was borne out when the tow wire disconnected and the ship began drifting back towards the coast, sinking in 50 m of water just 8 km from Koeberg Power Station, at 03.00 hrs on 23 June. The ship was carrying 140,000 tonnes of ore and over 1,300 tonnes of fuel oil².

Oil began to escape almost immediately. The ship sank in a very sensitive area for seabird colonies. Dassen Island held the largest breeding colony of African Penguin *Spheniscus demersus* in 2000, and is just 48 km to the north. Robben Island, with the third largest African Penguin colony and the third largest Bank Cormorant *Phalacrocorax neglectus* colony in South Africa, is c15 km to the south. The resulting oil slick was well within the foraging area of birds from Robben Island and probably within range of those from Dassen Island. Worse was to come. On 25 June,

the boom protecting Robben Island from the drifting oil slick broke. Oil reached the beaches that virtually all the penguins in the colony must use when moving to and from the sea. There was a realistic chance that the island's estimated 16,000 African Penguins would all be oiled. It was also the peak of the breeding season on both Robben and Dassen islands.

The rescue mission began on Robben Island the day after the ship had sunk with collection of oiled penguins for cleaning. Once the birds' landing beaches had become covered in oil, it became necessary to catch as many of the birds as possible, oiled or not, to try and keep the number of oiled birds needing treatment to a minimum. Uncharacteristically for June, Cape Town's weather remained calm and warm with temperatures reaching the mid-20°Cs on some days. With little wind to break it up, the slick drifted north with the Benguela current towards Dassen Island. The number of oiled birds arriving on the beaches of that island increased, and plans were put into place to fence off part of the penguin colony, thus preventing non-oiled individuals from entering the sea and the oil. Two days later, a decision was taken to evacuate as many of these birds from the island as possible.

While the oil spill affected several bird species, it was African Penguin that bore the brunt. Penguins from Robben Island were taken by boat to Cape Town and then by road, the oiled birds going to SANCCOB's cleaning facilities. The 7,000 non-oiled penguins that were evacuated were initially taken to a nearby research aquarium. From here, they were trucked overnight to Port Elizabeth, c800 km to the east of Cape Town. Penguins from Dassen Island were transported by boat or helicopter. Over the course of three days, 12,345 non-oiled penguins were evacuated from Dassen Island and taken to Port

Elizabeth in three-tiered sheep lorries. The oiled birds were taken by road to SANCCOB's cleaning station in Table View, Cape Town.

The total number of non-oiled evacuees was 19,536. But why take them to Port Elizabeth? It was known, from past experience, that cleaned birds previously released on Robben Island, had swum back to their colonies in Algoa Bay (where Port Elizabeth is situated) and that the fastest one to do so had taken 11 days. The plan was to give the authorities time to clear the oil before the birds could swim back to their breeding colonies near Cape Town. It was not practical to keep and feed so many birds in captivity. By releasing them far from their colonies it would buy the time needed to clear the oil and allow the birds to feed naturally on their way back. Three birds (one from Robben Island, two from Dassen Island) were fitted with satellite transmitters enabling progress to be monitored. Their positions were plotted daily on the Avian Demography Unit website and the world held its breath as the three, new media celebrities (Peter, Percy and Pamela) covered the 800 km marathon. All three escaped the attention of hungry sharks and seals and returned safely to their islands (where Pamela was actually discovered to be a male!). There were only 241 known casualties from this exercise, just over 1% of the total number of evacuees.

Prior to the sinking of the *Treasure*, the worst oil spill to affect South Africa was caused by the sinking of another bulk-ore carrier, the *Apollo Sea*, which went down on 20 June 1994, exactly six years and three days before *Treasure's* demise. The *Apollo Sea* sank close to Dassen Island and resulted in the oiling of 10,000 African Penguins³. The number of oiled penguins collected after the *Treasure* sank reached 19,000, nearly double that of the previous incident. This far exceeded the number that SANCCOB's facilities could cope with and a satellite station was needed. The unlikely locality chosen was a disused railway warehouse in Salt River, near the city centre. It was soon transformed into a rehabilitation centre for c15,500 oiled penguins, with 328 plastic swimming pools and 64 artificial dams utilising 5,760 tons of sand! The old railwaymen's washrooms were converted into a penguin washing and rinsing unit, processing over 500 penguins a day. Thousands of volunteers, both at Table View and Salt River, devoted their time and energy to wash, rinse, feed and get bitten by penguins. They came from all over the world: joining the thousands of volunteers from South Africa were experts and helpers from the USA, UK, Australia, France, Canada and Brazil to name but


a few. The result was scarcely thought possible at the beginning of the spill. By late August, the Salt River operation had closed: most of the penguins had already been released back to the wild. By early October, over 16,000 penguins had been cleaned and had regained their freedom. The death toll was below 2,000, 10.3% of the total number known to have been oiled. This compares with a 50% death toll following the *Apollo Sea* incident. Only c130 individuals were thought to have died in the field.

But what of all the abandoned nests on the islands? Unfortunately, thousands will have come to grief, although many pairs, on Dassen Island in particular, had already fledged their chicks. Approximately 3,000 of the larger chicks were taken from the islands and hand-reared at various points between Cape Town and Durban. Ninety percent of these survived to be released.

So a major disaster, that threatened 40% of the African Penguin population, was minimised due to a major international effort involving several organisations and thousands of caring individuals. But what happens to these birds after they are returned to the wild? In research following the *Apollo Sea* oil spill, 73% of released individuals returned to breeding colonies and were detected within five years⁴, and a minimum of 28% was known to have survived into a fifth year following the spill. The individuals were also found to be capable of breeding successfully, achieving similar success to non-oiled birds after two years following the spill (A C Wolfaardt pers comm).

While the *Treasure* operation can be deemed a success, it emphasises the need to minimise the risk of a similar event happening again, perhaps by strengthening legislation and stricter enforcement of existing laws relating to marine traffic. In the meantime, the challenge will be to prepare for the next spill.

Acknowledgements

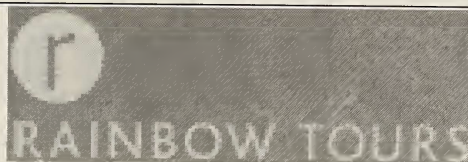
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